Mini System

CMD310/55

Service

Service



Service Manual

TABLE OF CONTENTS

CLASS 1
LASER PRODUCT

Version1.0

PHILIPS

314178537260

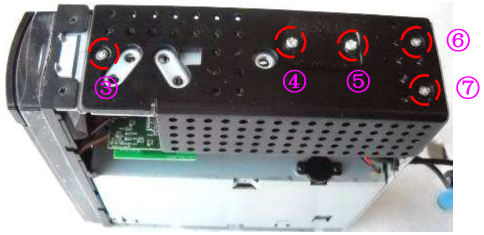
CMD310 -- Dismantlement Method

1. Remove the two screws in the top cover and then remove the top cover ; remove the five screws in heat sink and then remove the heat sink

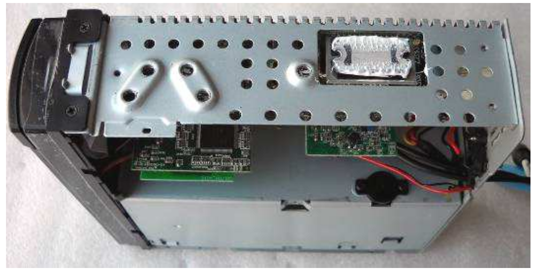


Remove the screws in the top cover

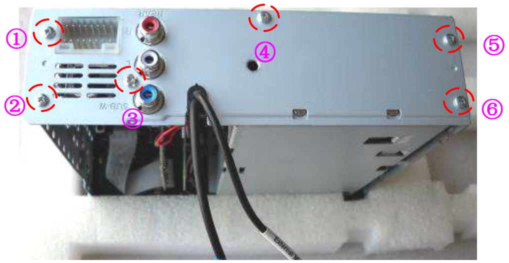

Remove top cover



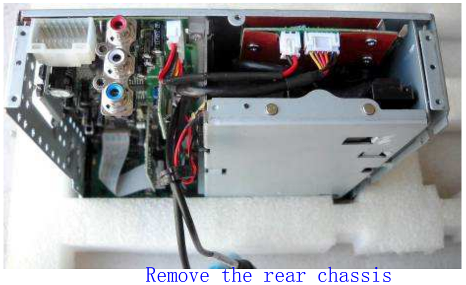
Remove the screws in the heat sink

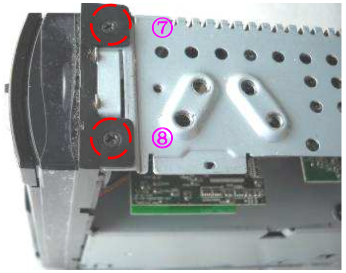

Remove heat sink

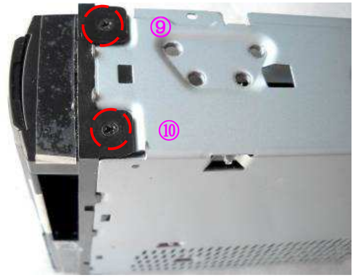
2. Remove the six screws in the rear chassis and then remove the rear chassis ; Remove the four screws in left right of the base panel



Remove the six screws

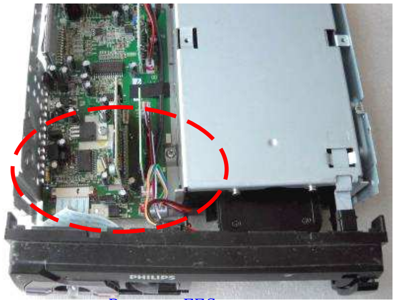

Remove the rear chassis



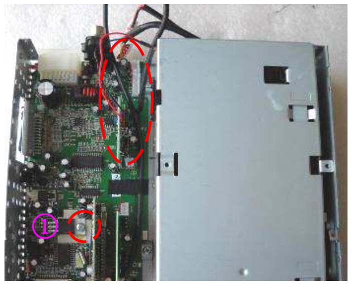


Remove the screws on the left right side of the base panel

3. Remove the FFC which was connected the panel and main board, then remove the panel; Remove the screw in the main board and wire which was connect to small board, then remove main board


Remove FFC


Remove panel

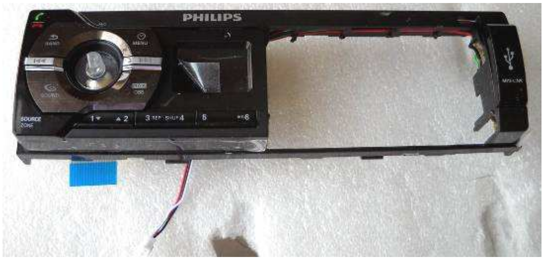


Remove the screw and wire

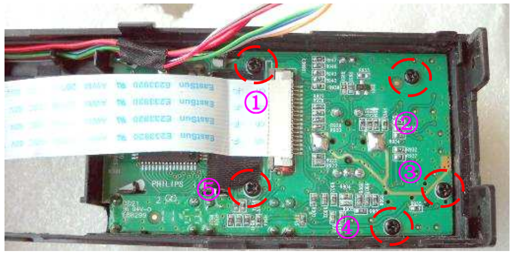

Remove main board


Main board

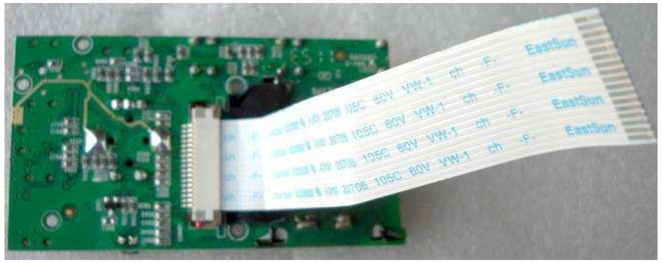
4. Remove the five screws which was used for fixing the KB baord of the panel



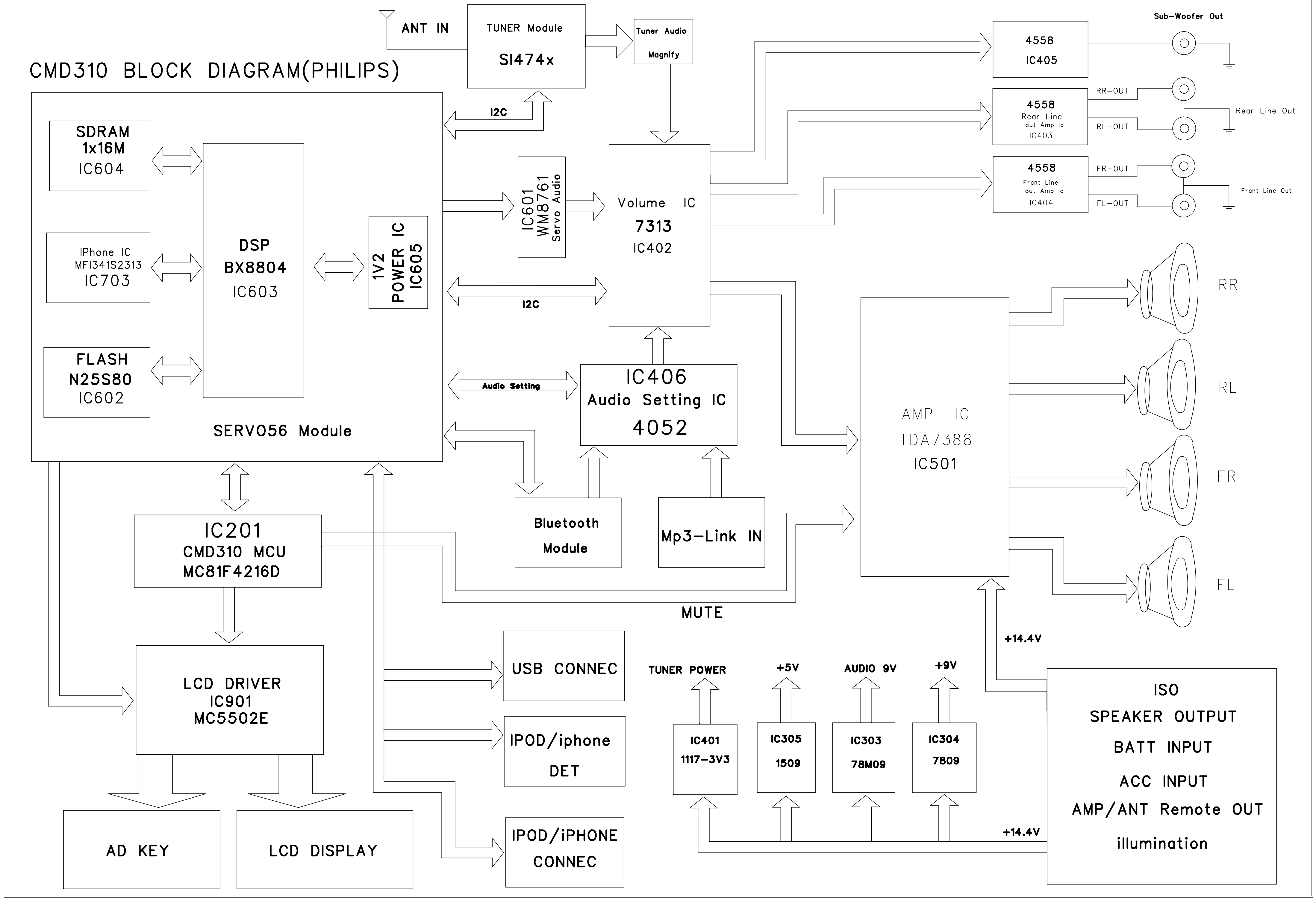
Panel



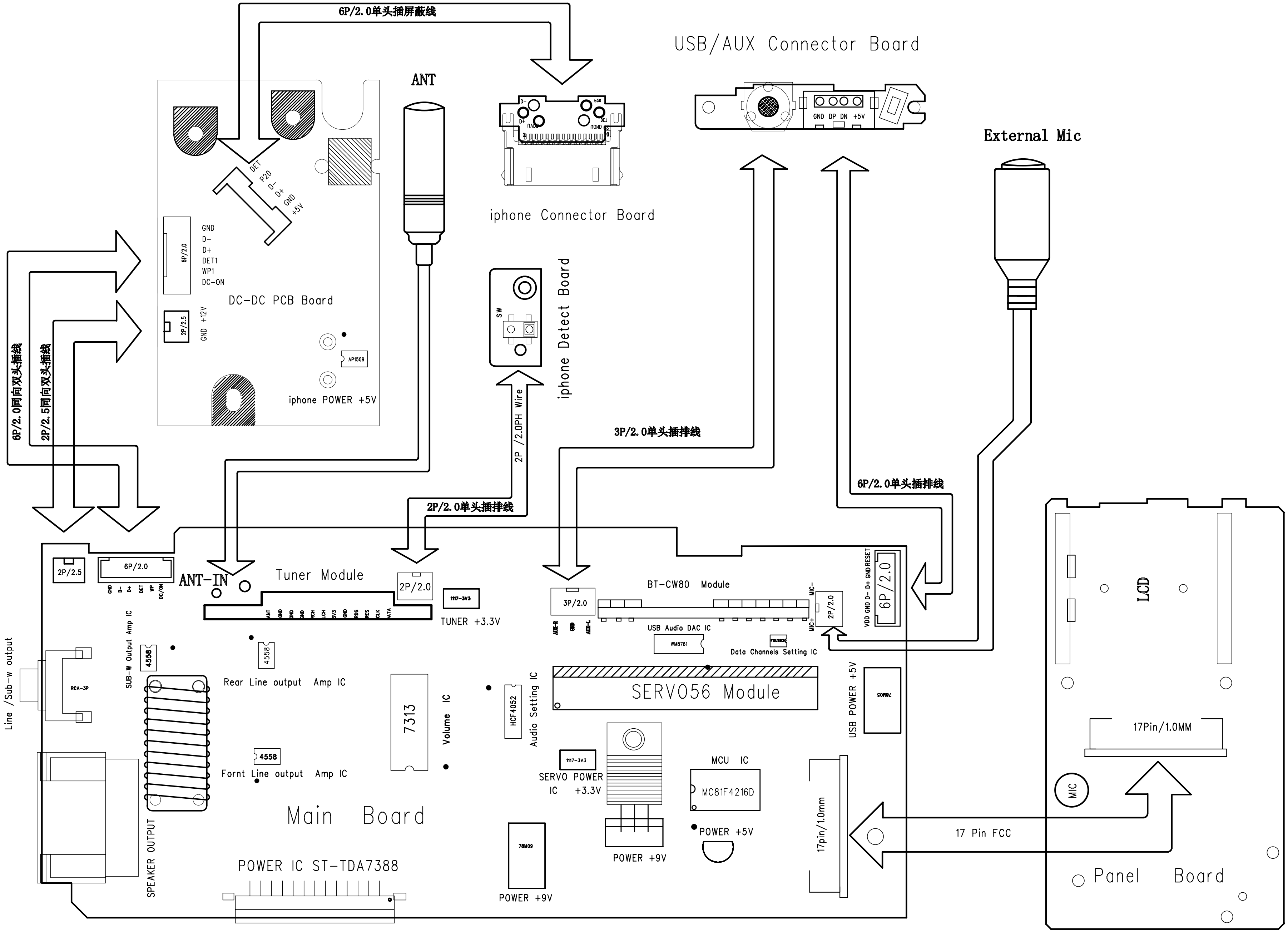
Remove the five screws


PANEL PCB

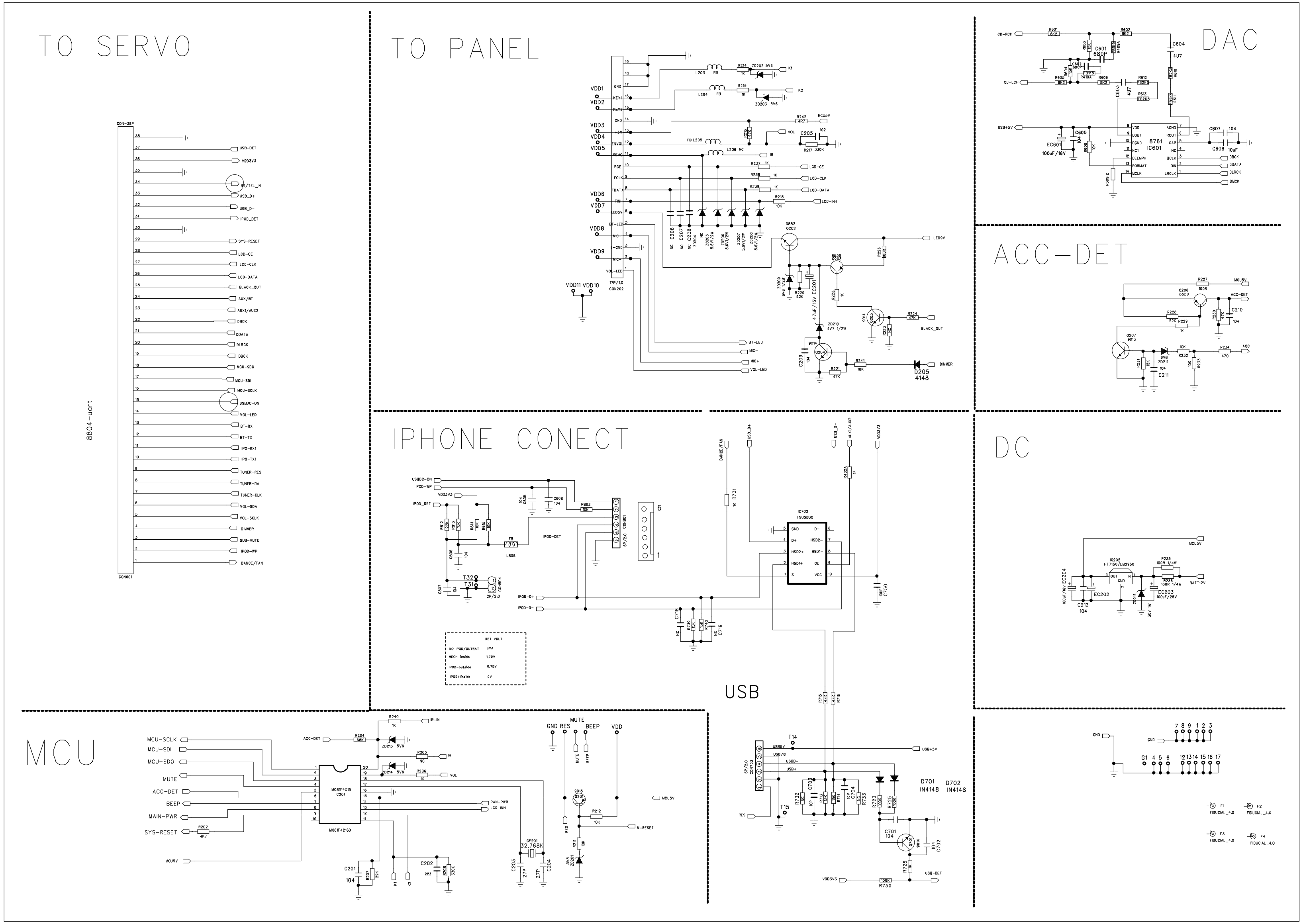
CMD310 BLOCK DIAGRAM(PHILIPS)

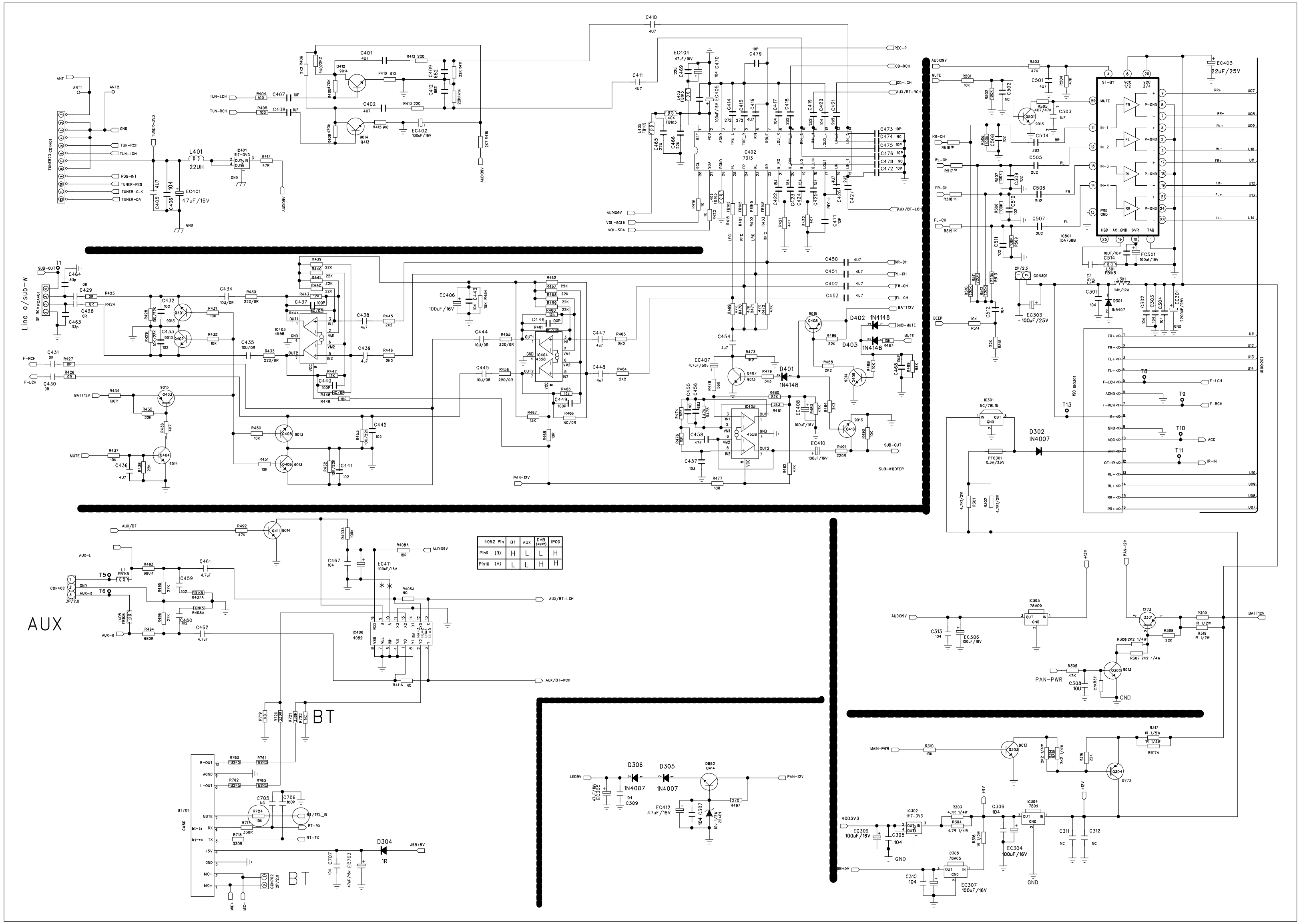


WIRING DIAGRAM

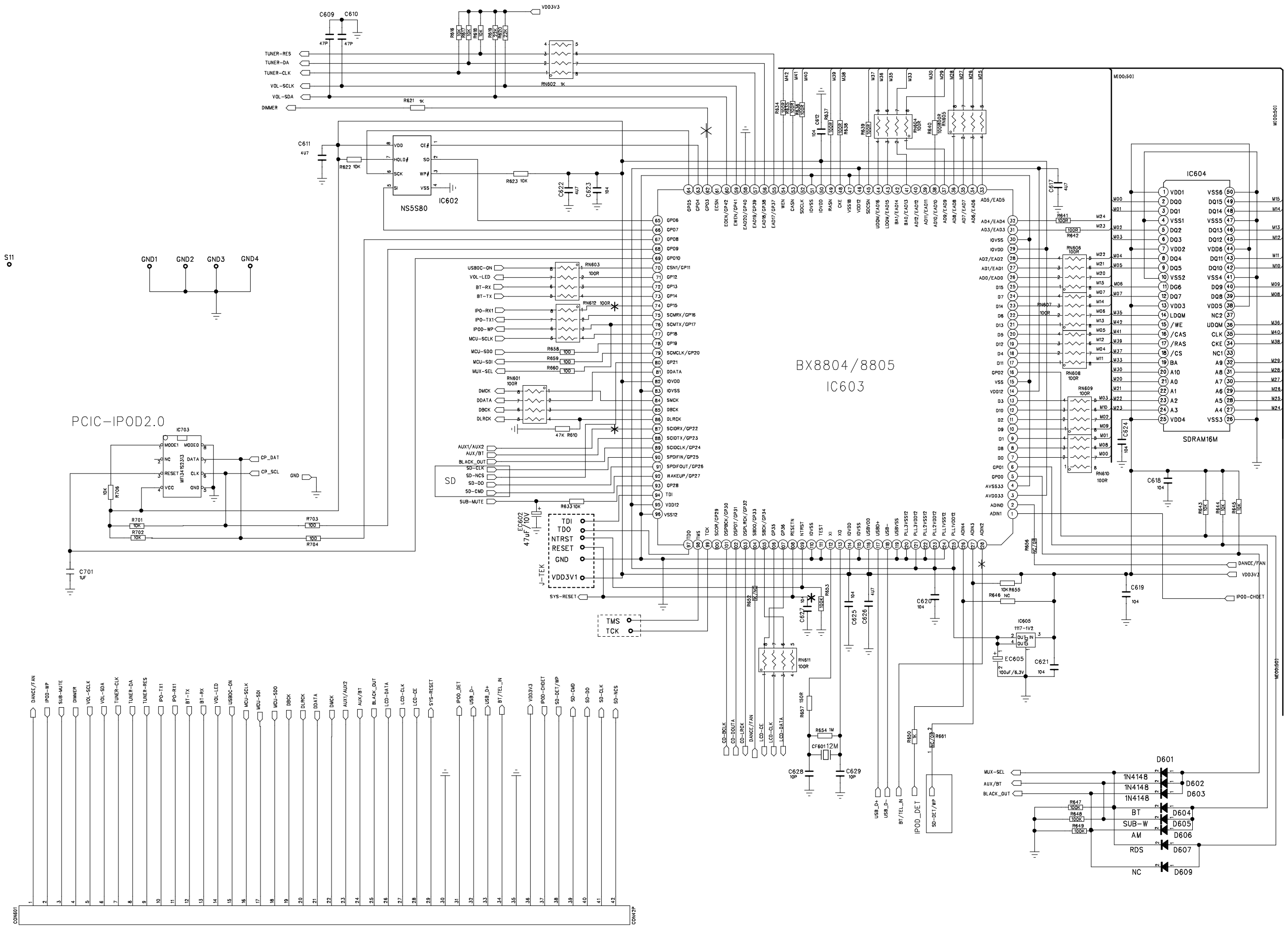


CIRCUIT DIAGRAM -MAIN BOARD

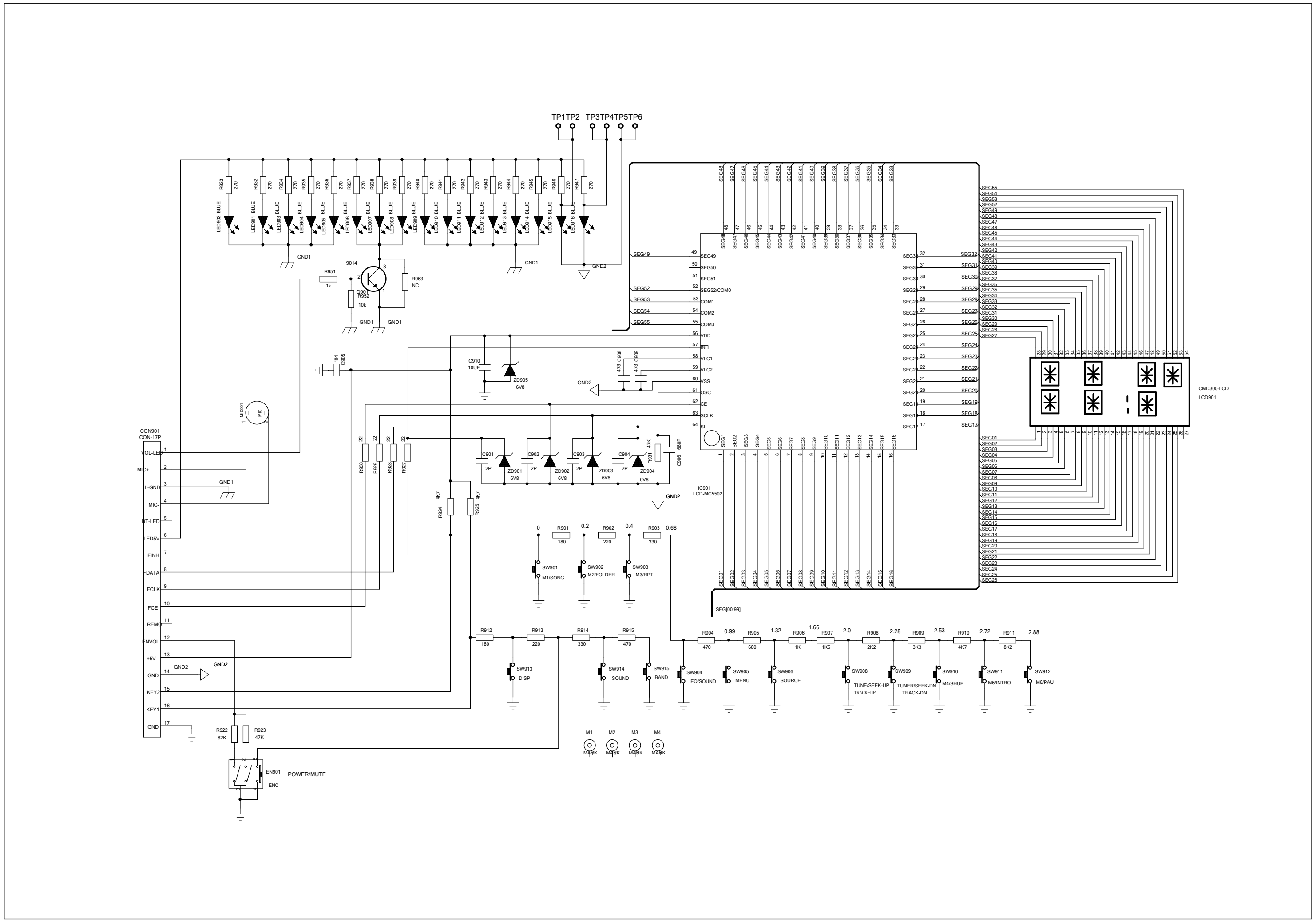



Line o/sub-w
AUX
BT
BT
4052 Pin | BT | AUX | DAB (mp3) | IPOD
Pin9 (B) | H | L | L | H
Pin10 (A) | L | L | H | H
TDA7388
SUB-WOOFER
PAN-PWR

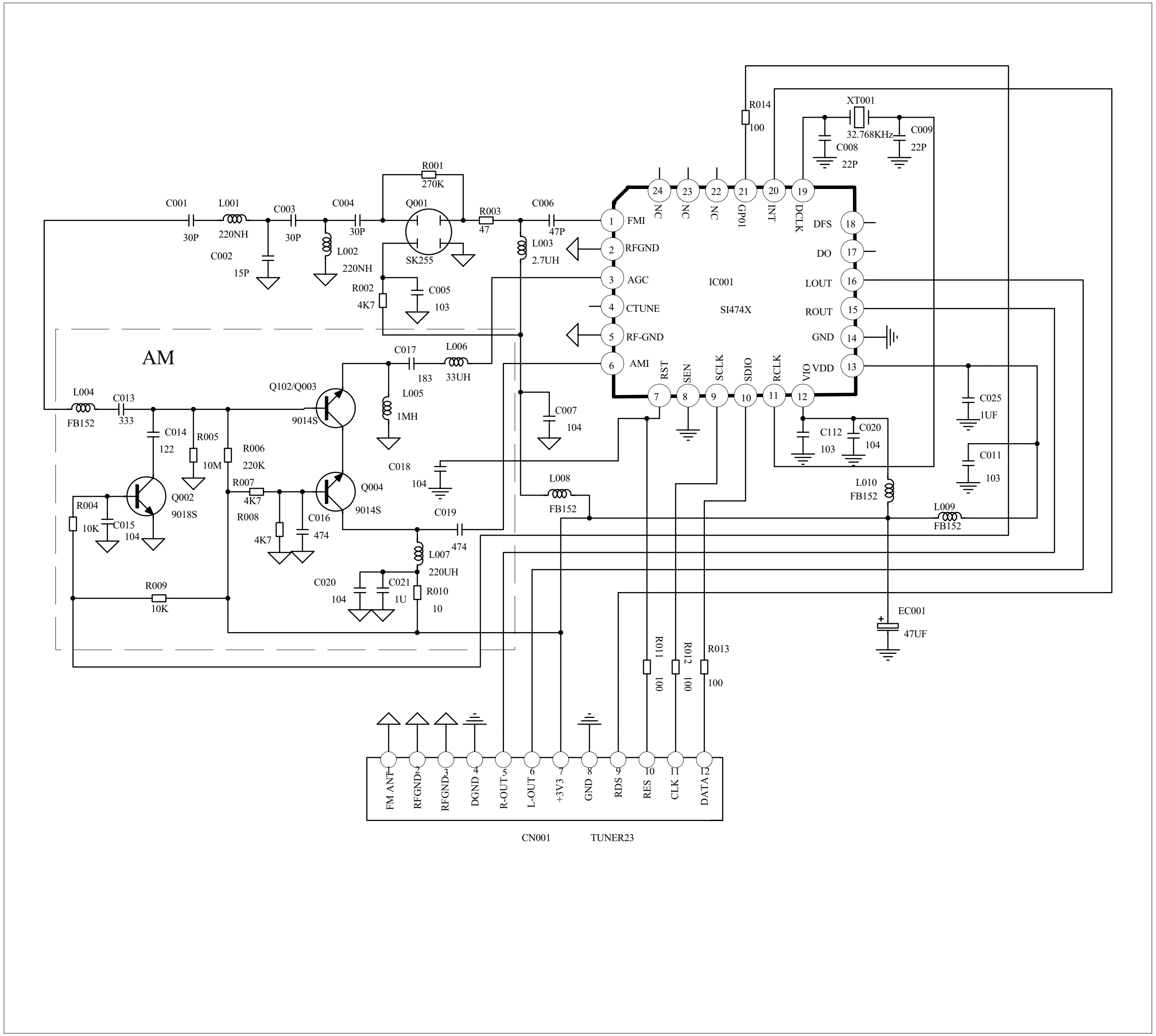
CIRCUIT DIAGRAM -SERVO BOARD



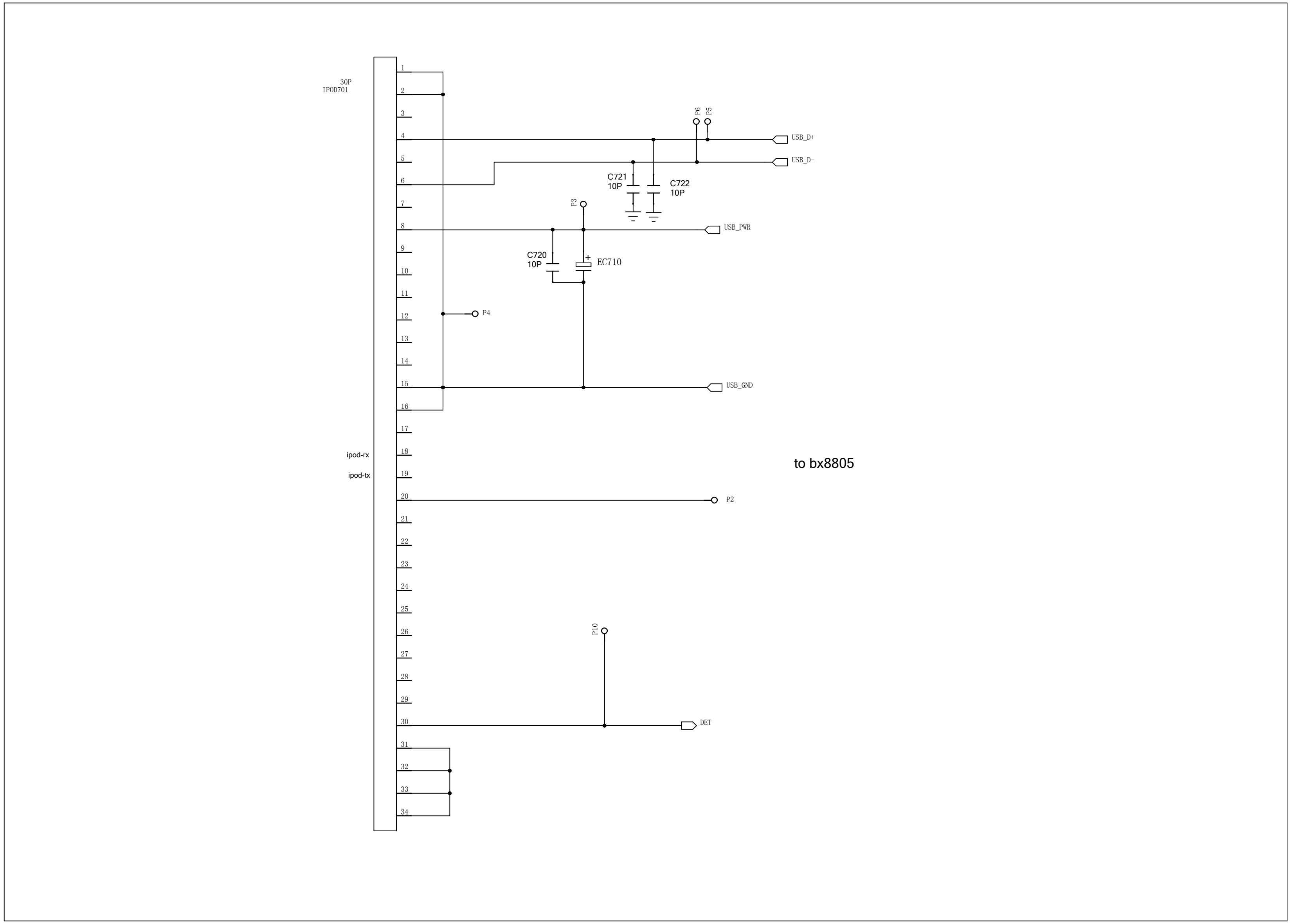
CIRCUIT DIAGRAM -PANEL BOARD



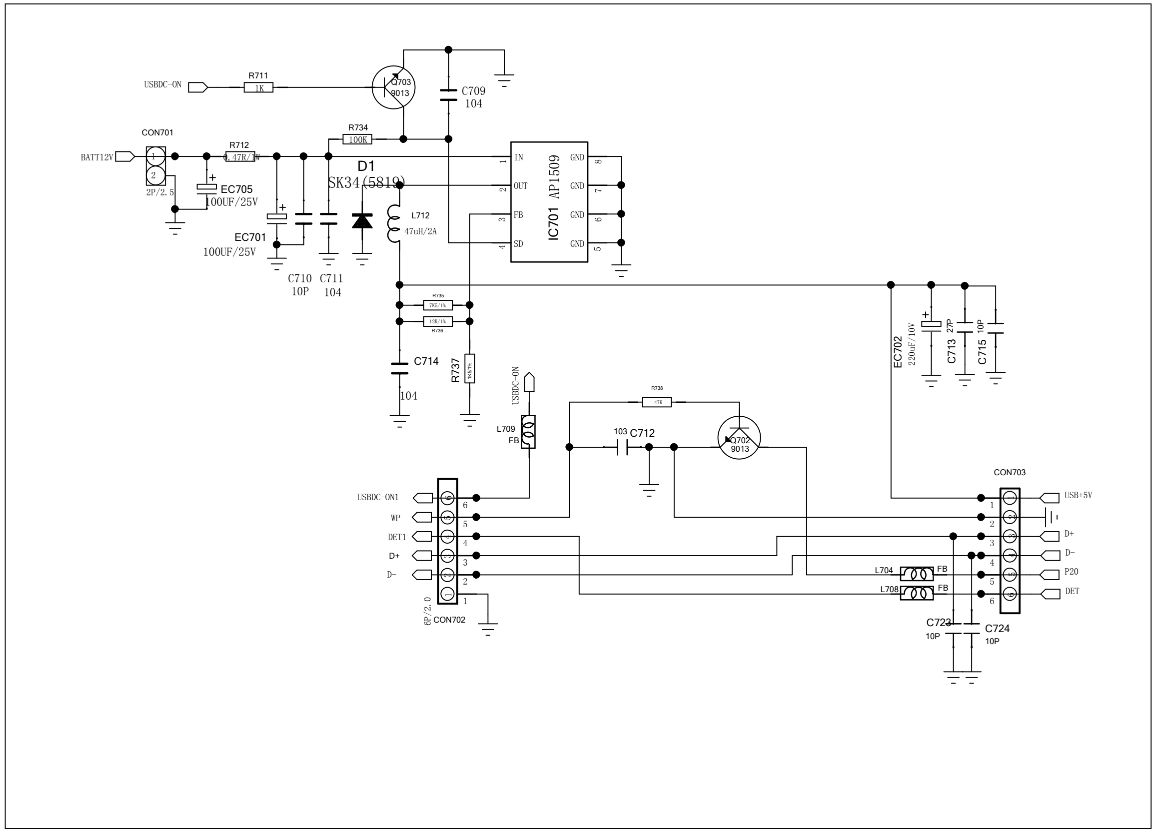
CIRCUIT DIAGRAM -TUNER BOARD



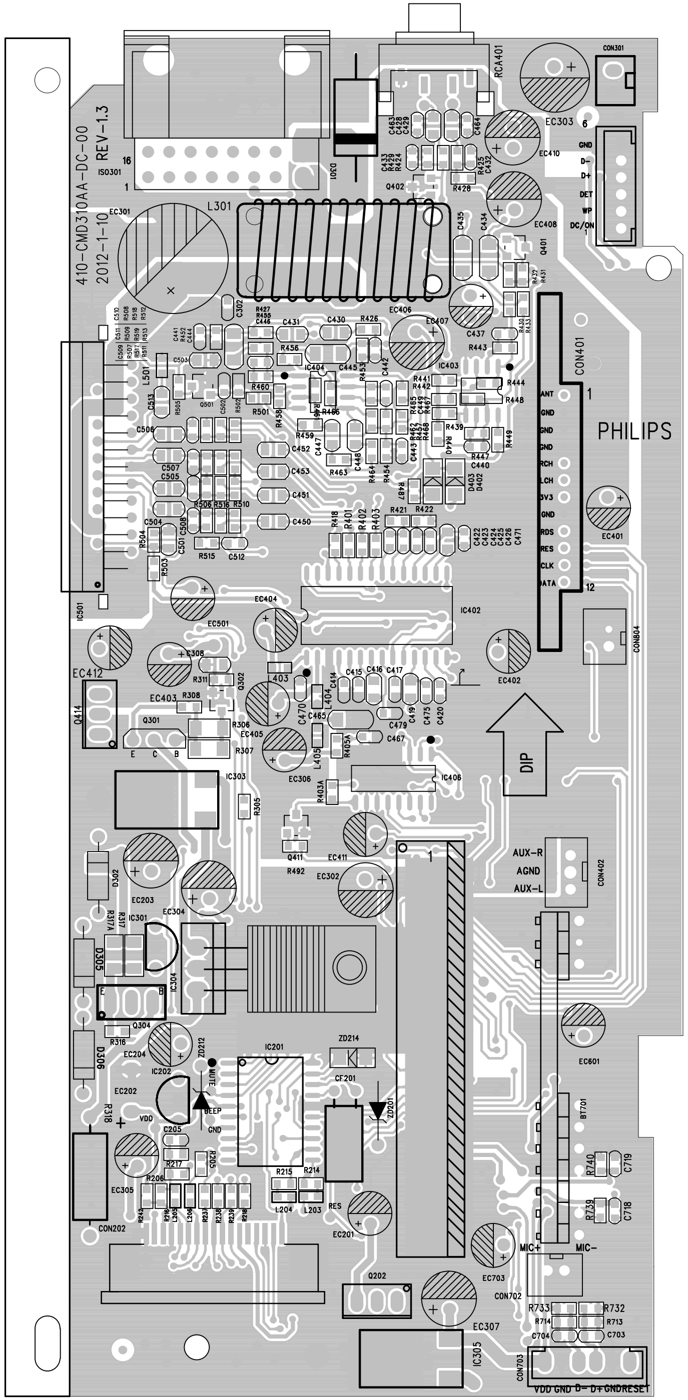
CIRCUIT DIAGRAM -IPOD CONTACT BOARD



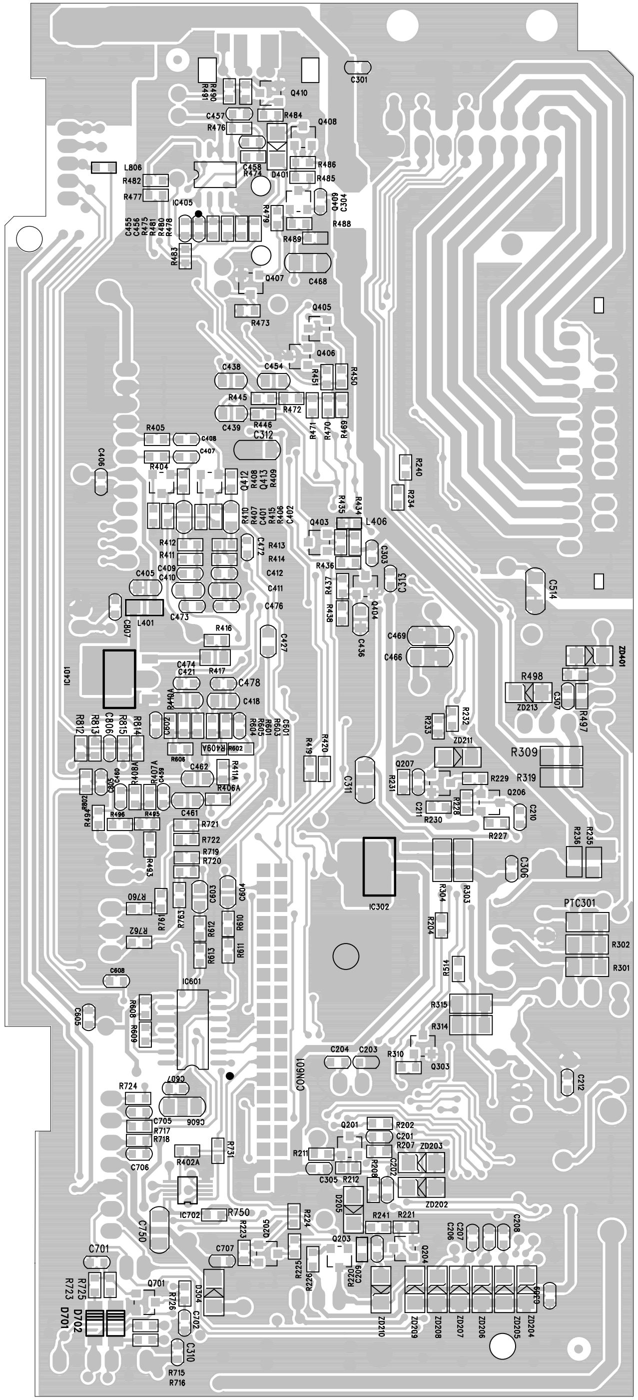
CIRCUIT DIAGRAM -POWER BOARD



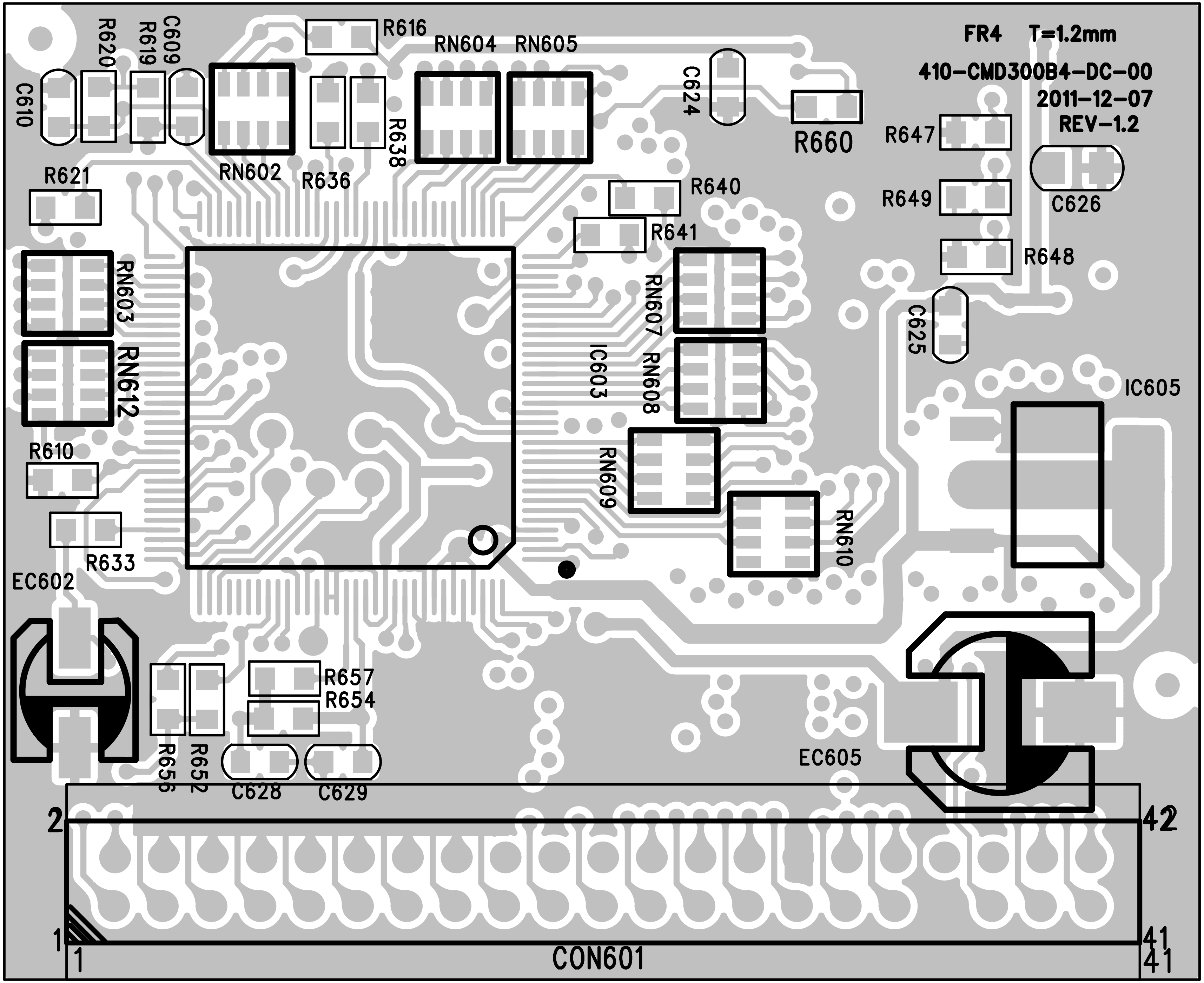
PCB LAYOUT-MAIN BOARD TOP SIDE VIEW



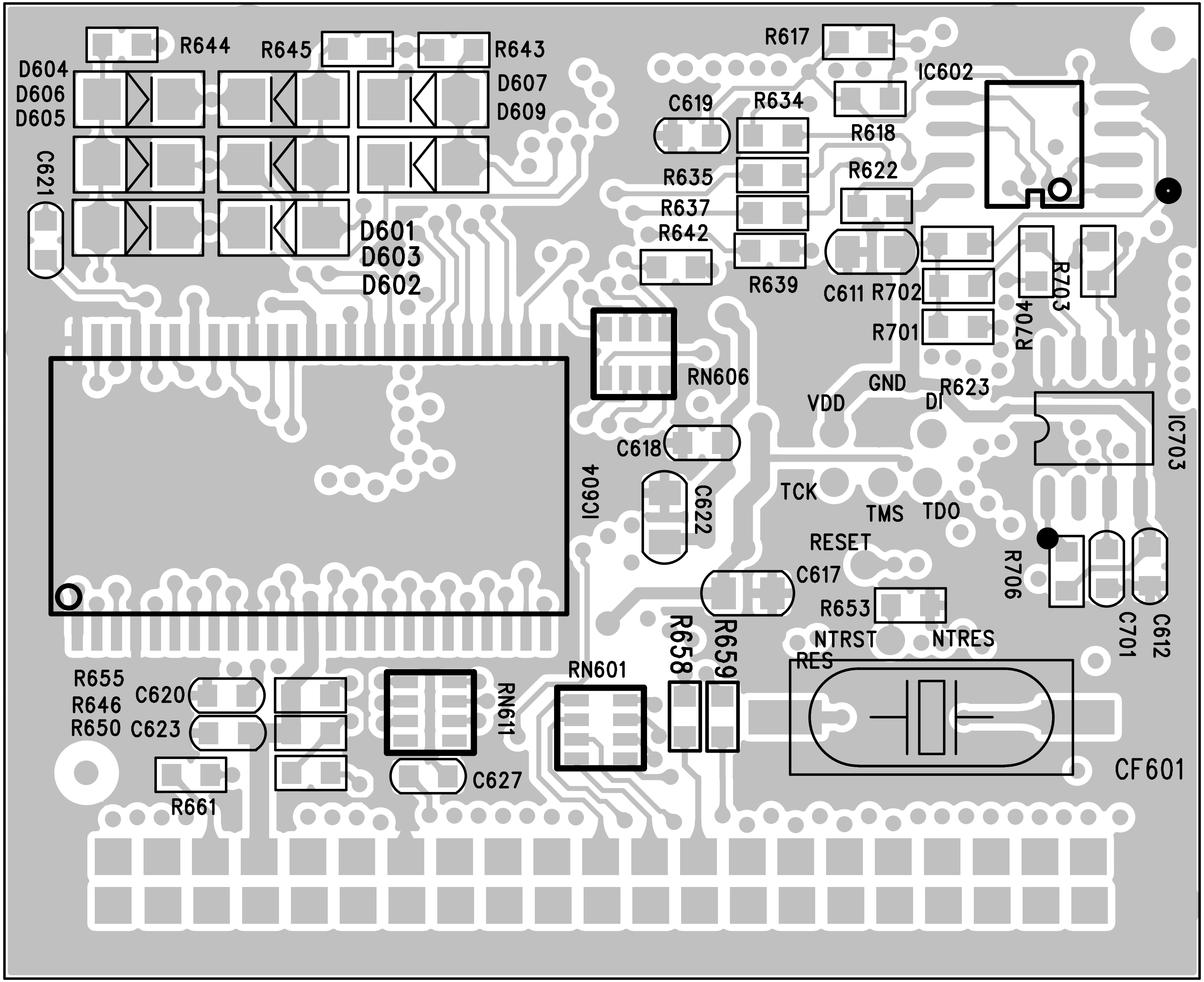
PCB LAYOUT-MAIN BOARD BOTTOM SIDE VIEW



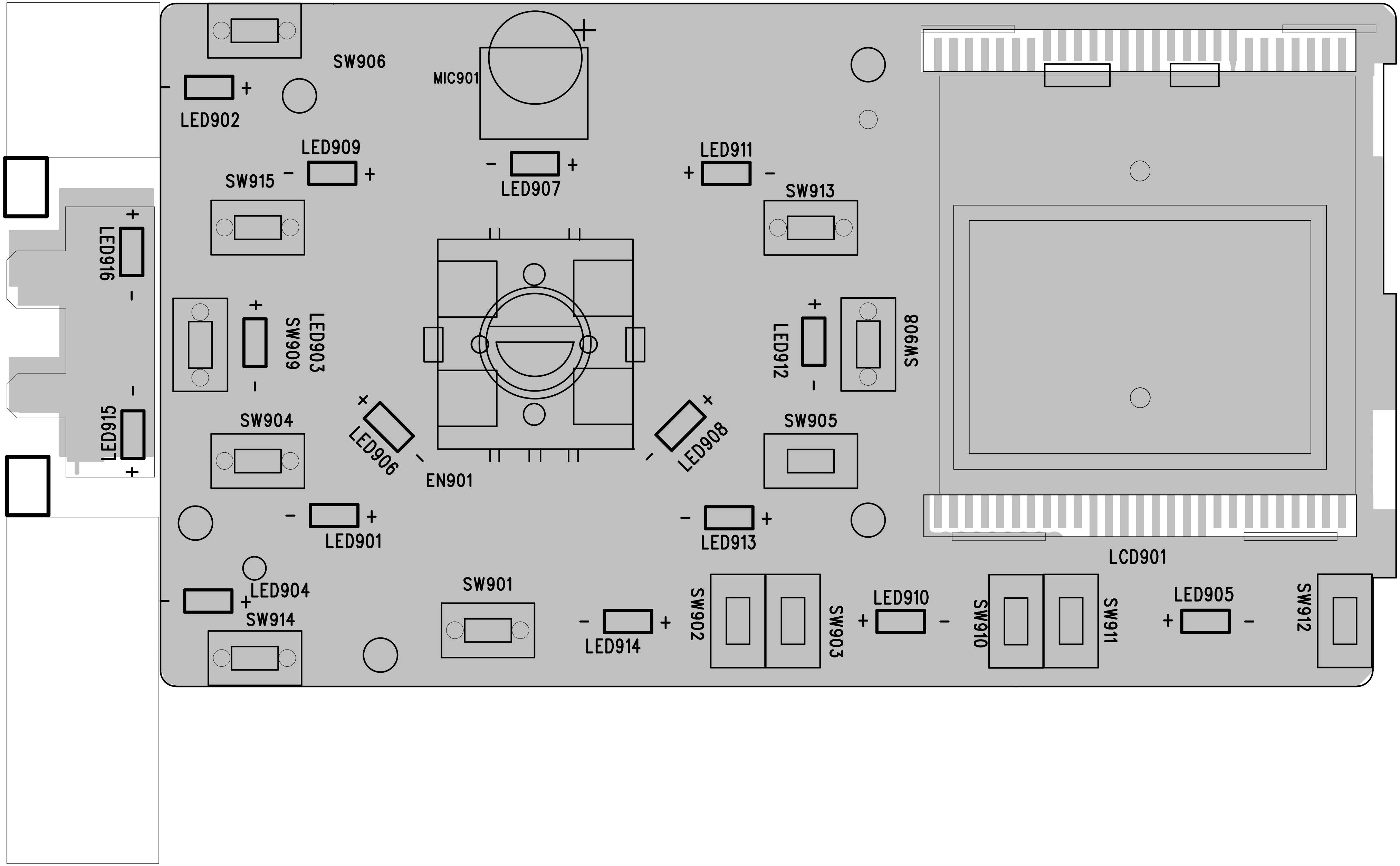
PCB LAYOUT-SERVO BOARD TOP SIDE VIEW



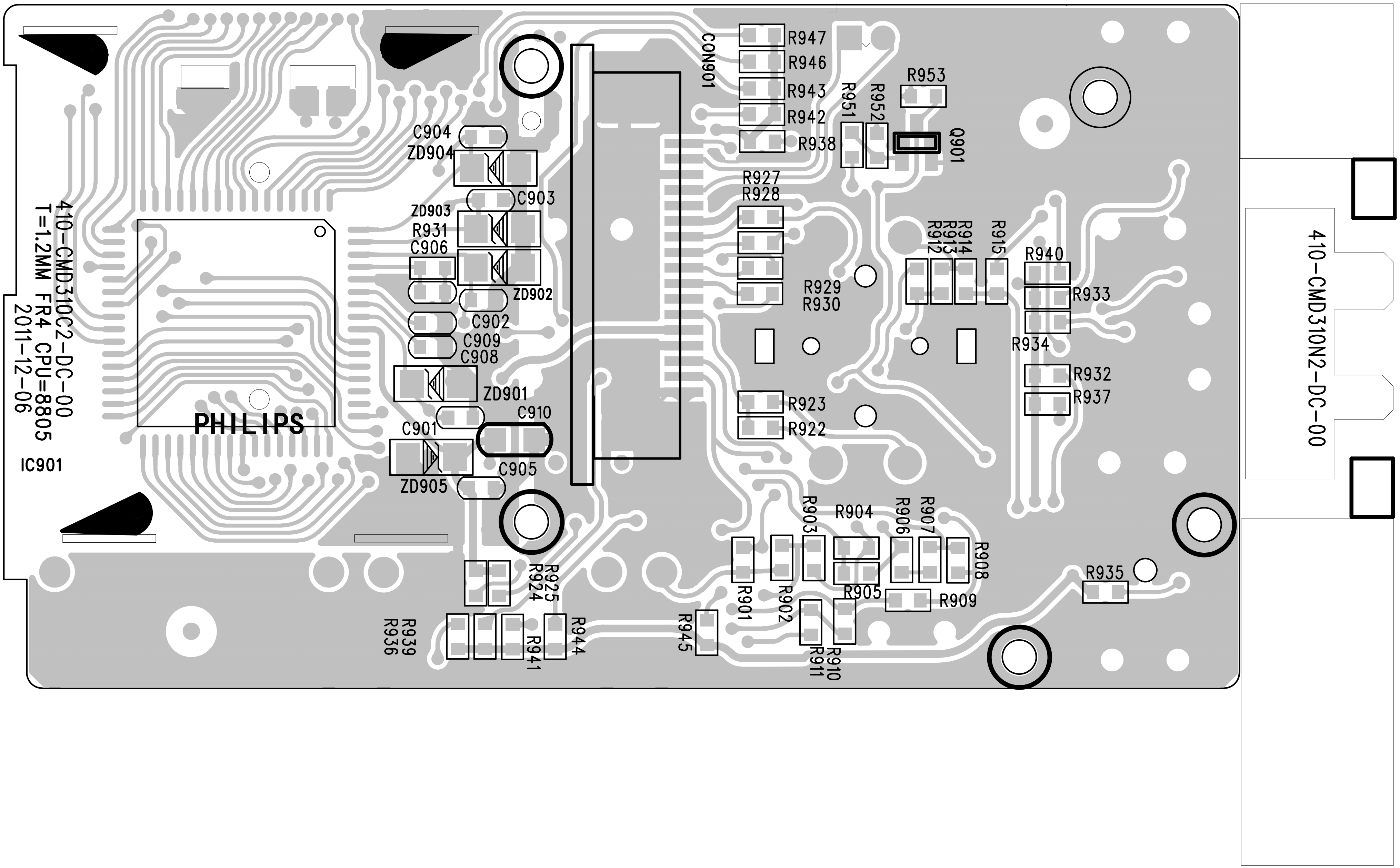
PCB LAYOUT-SERVO BOARD BOTTOM SIDE VIEW

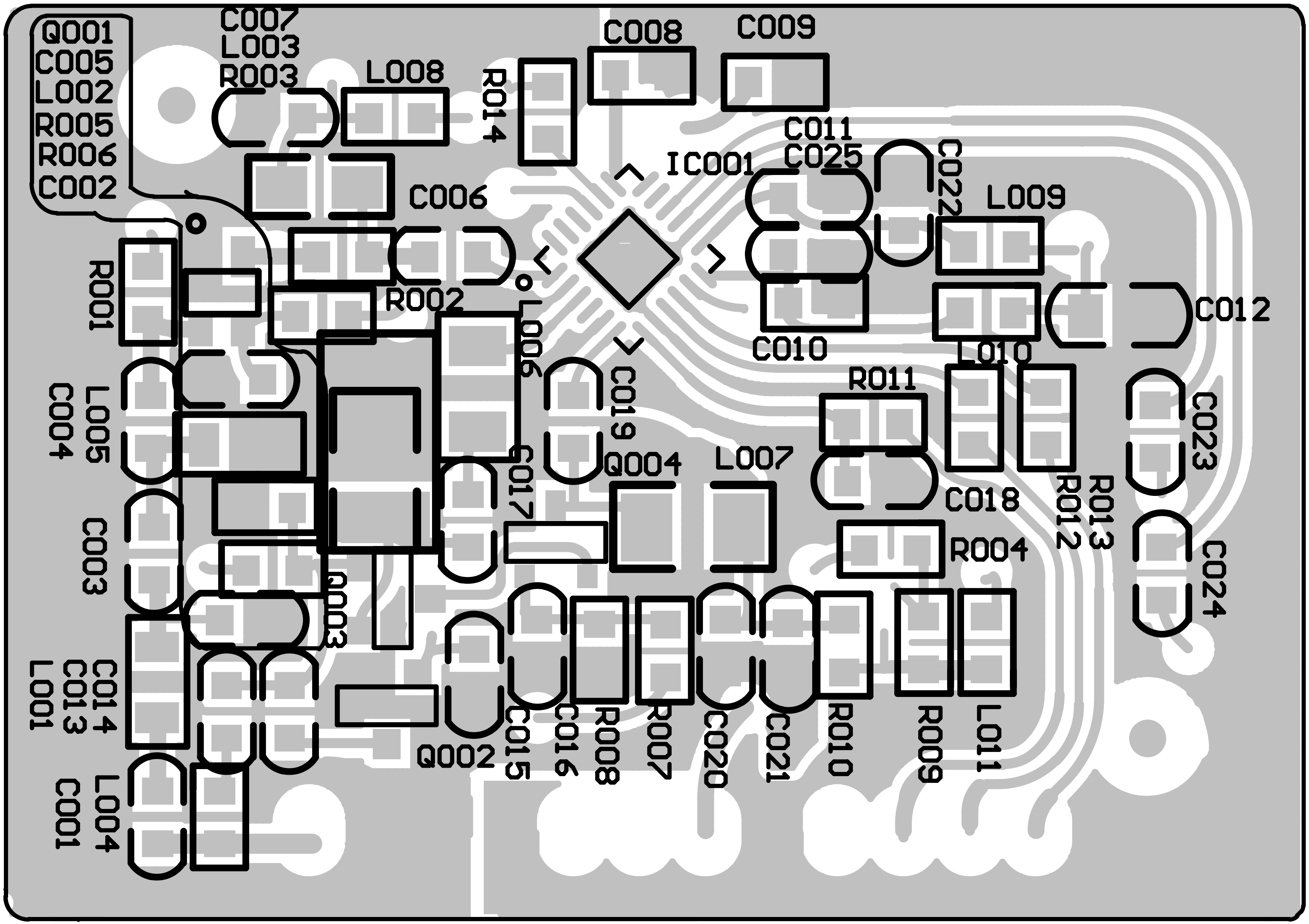


PCB LAYOUT-PANEL BOARD TOP SIDE VIEW

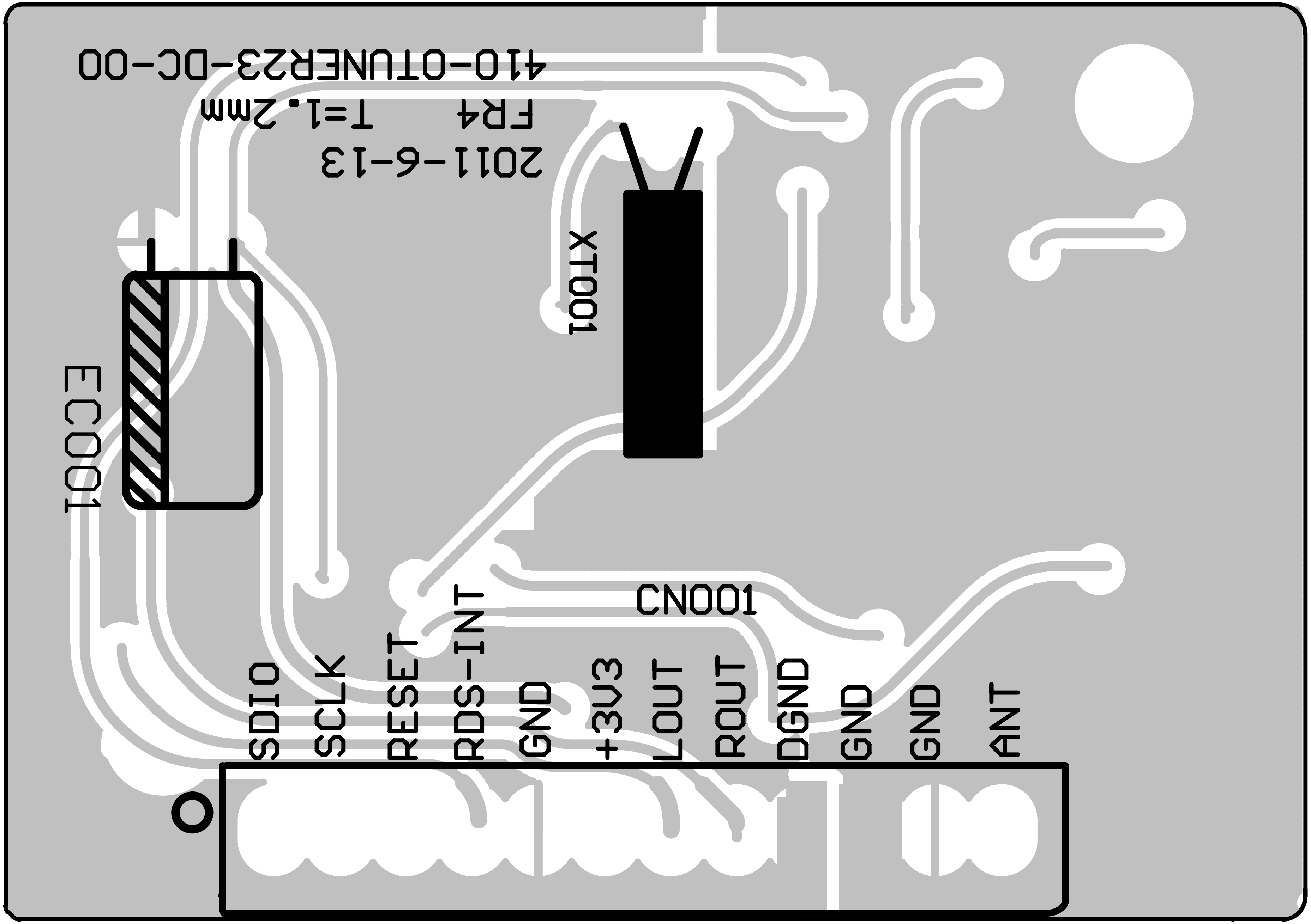


PCB LAYOUT-PANEL BOARD BOTTOM SIDE VIEW

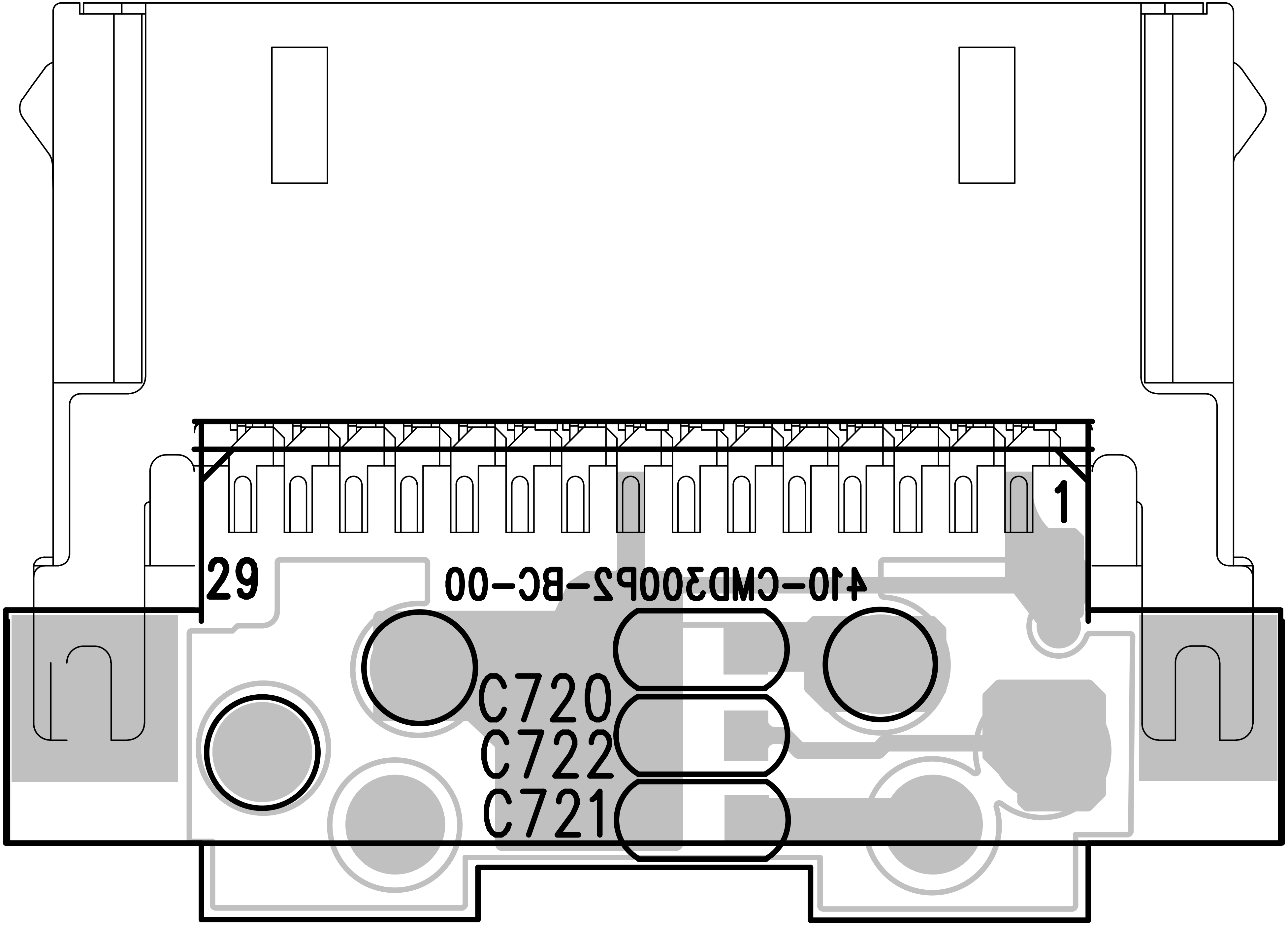



Q001
C005
L002
R005
R006
C002
C007
L003
R003
L008
R014
C008
C009
C011
C025
IC001
C022
L009
C006
R001
R002
L006
C012
C010
L010
C019
R011
C004
L005
C017
Q004
L007
C023
C018
R012
R013
C003
R004
Q003
C024
C014
C013
L001
Q002
C015
C016
R008
R007
C020
C021
R010
R009
L011
C001
L004

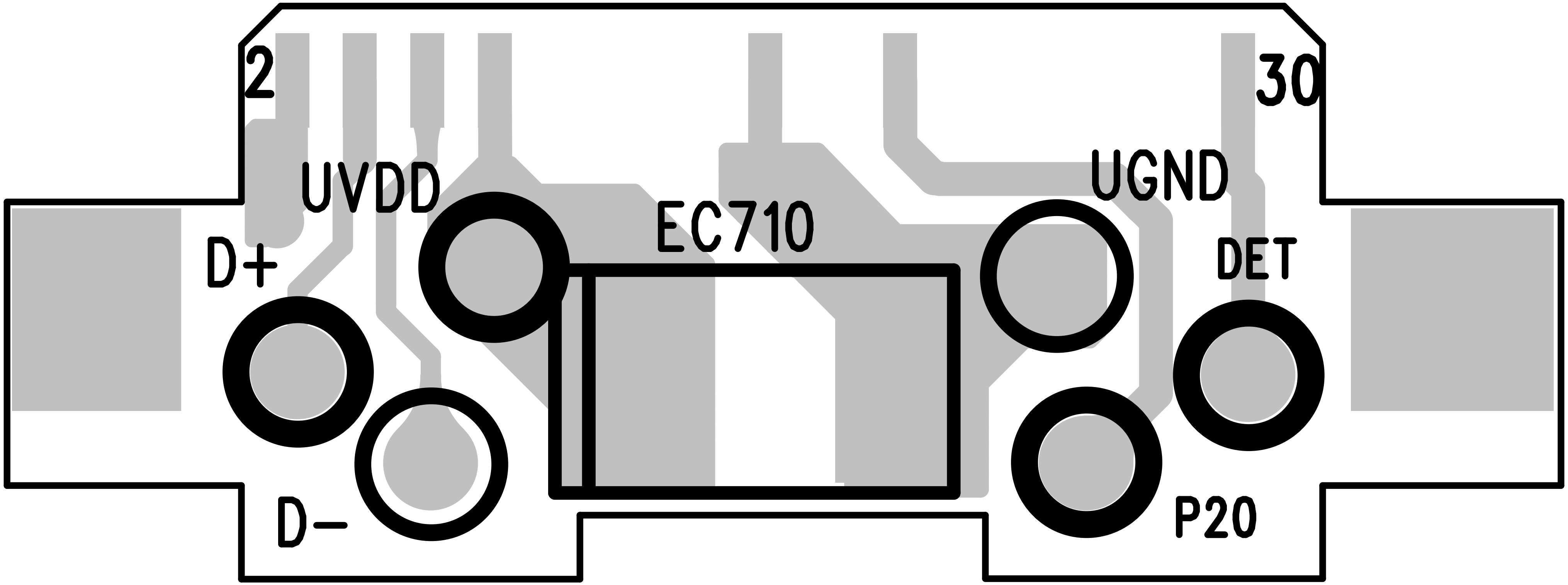
PCB LYOUT-TUNER BOARD BOTTOM SIDE VIEW



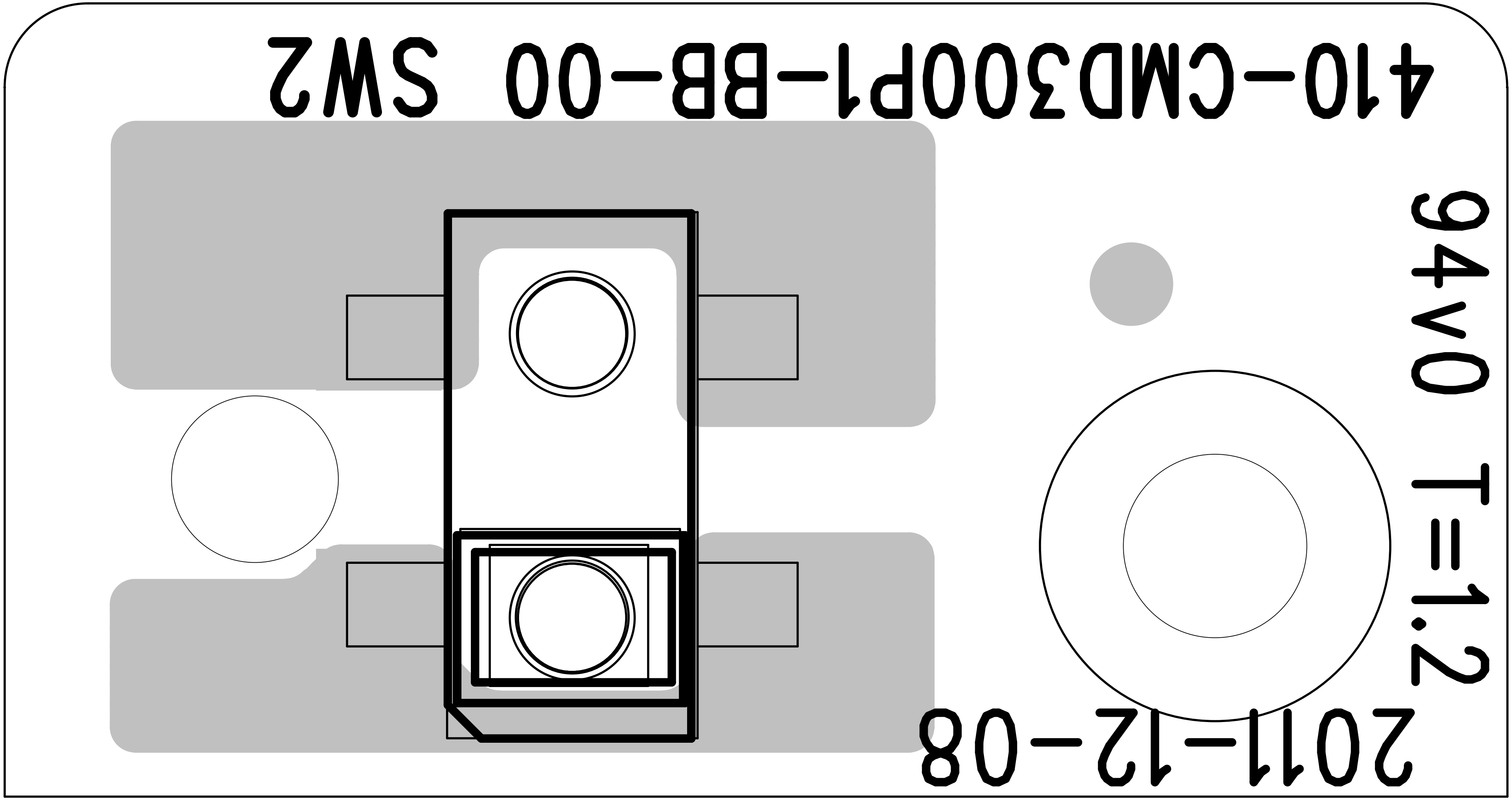
PCB LAYOUT-IPOD CONTACT BOARD TOP SIDE VIEW



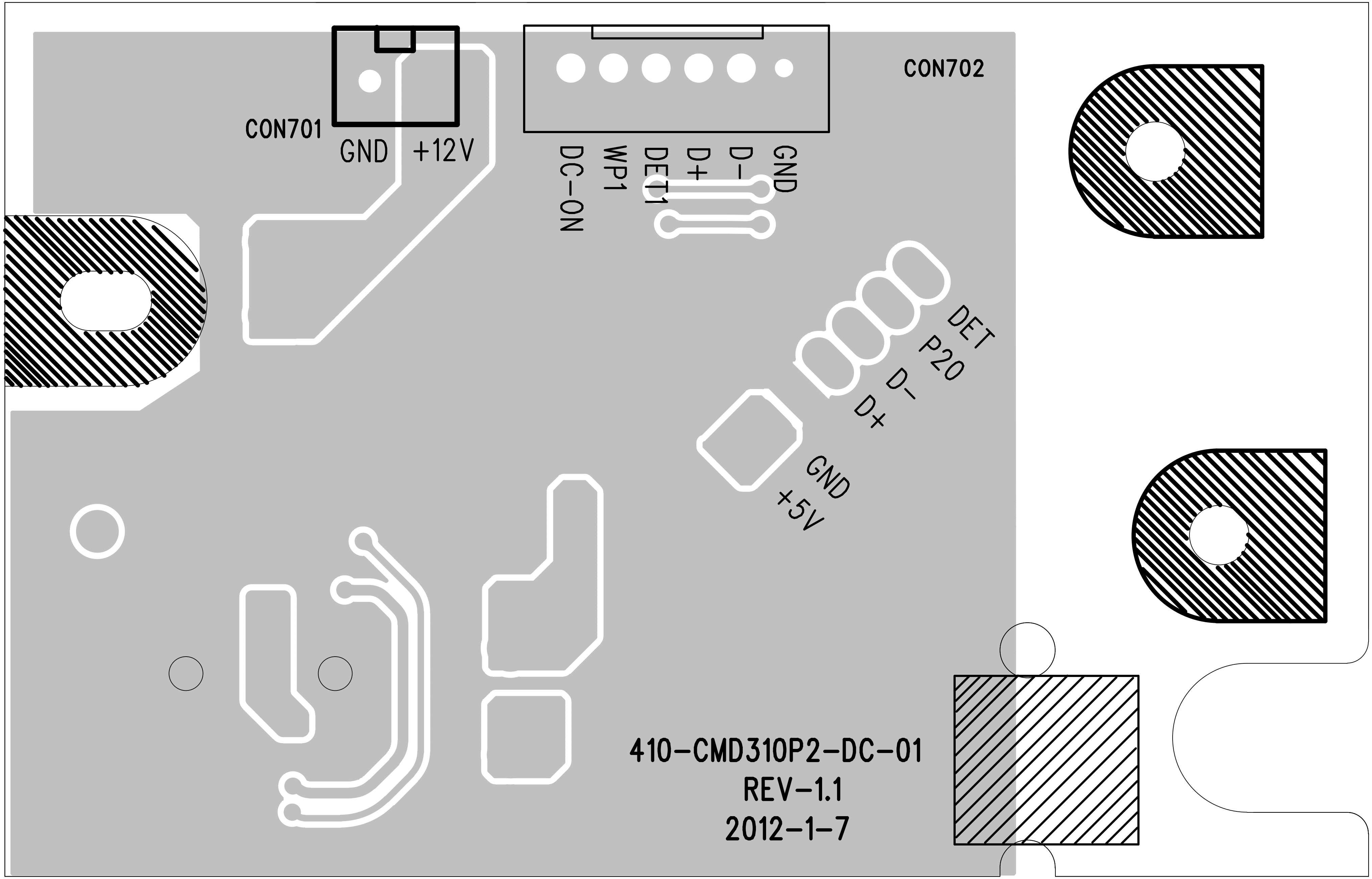
PCB LAYOUT-IPOD CONTACT BOARD BOTTOM SIDE VIEW



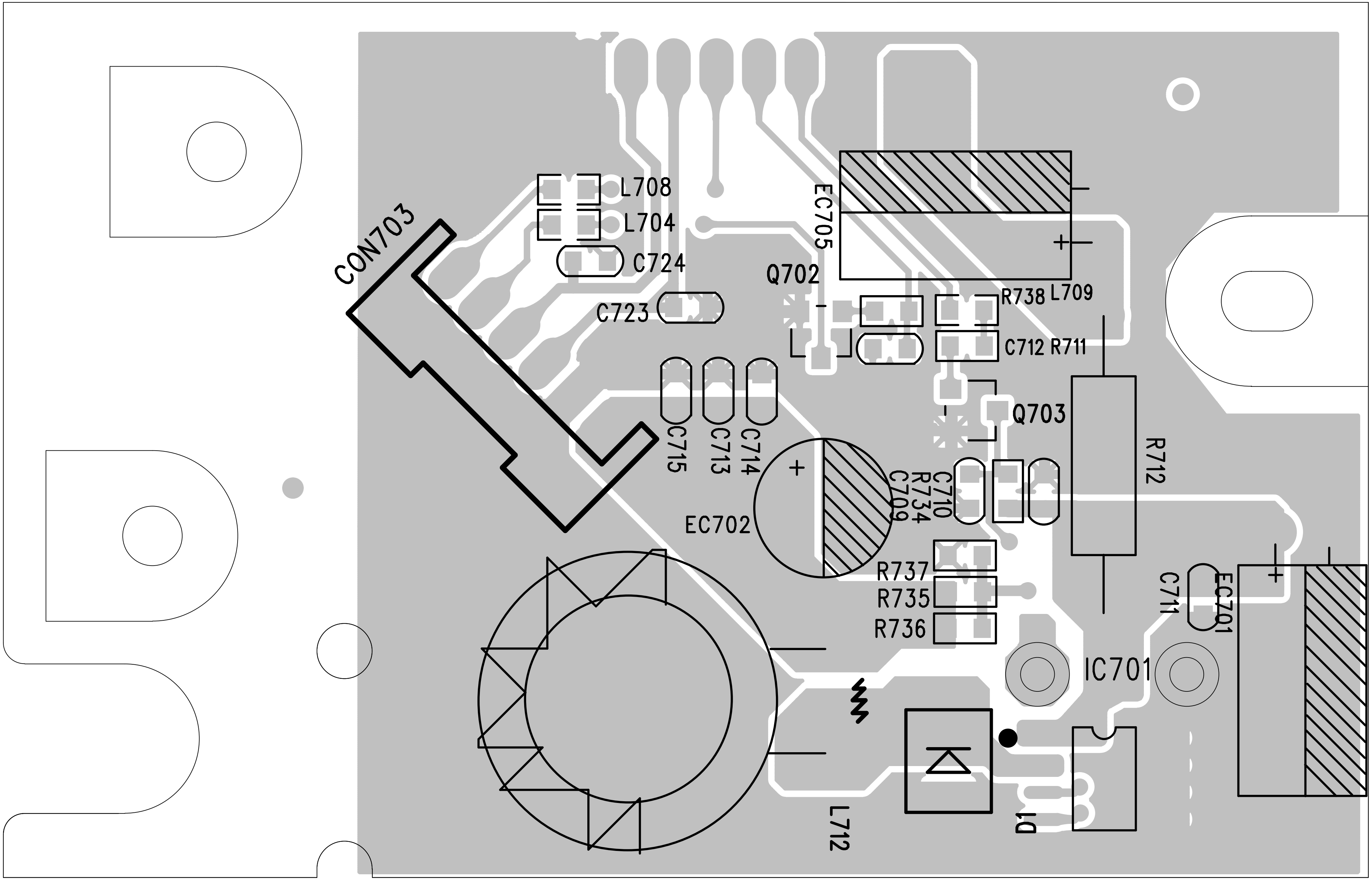
PCB LAYOUT-IPOD BOARD TOP SIDE VIEW

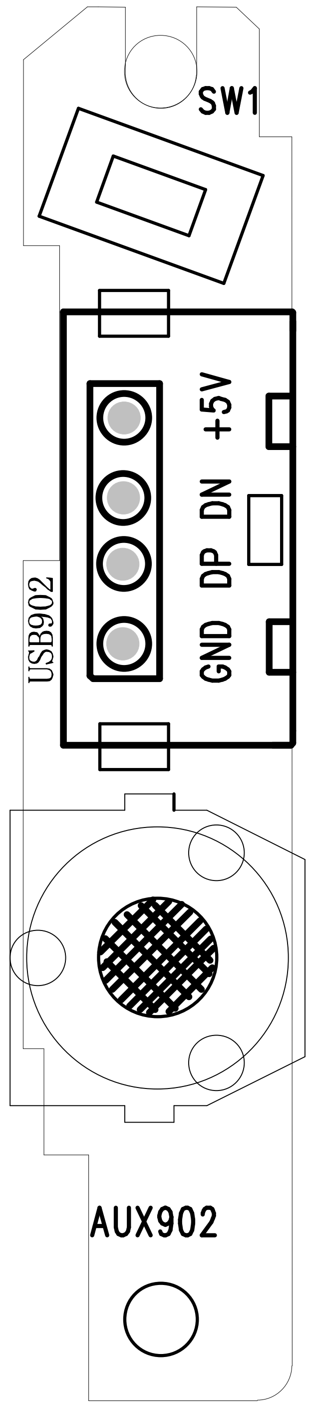


PCB LAYOUT-POWER BOARD TOP SIDE VIEW

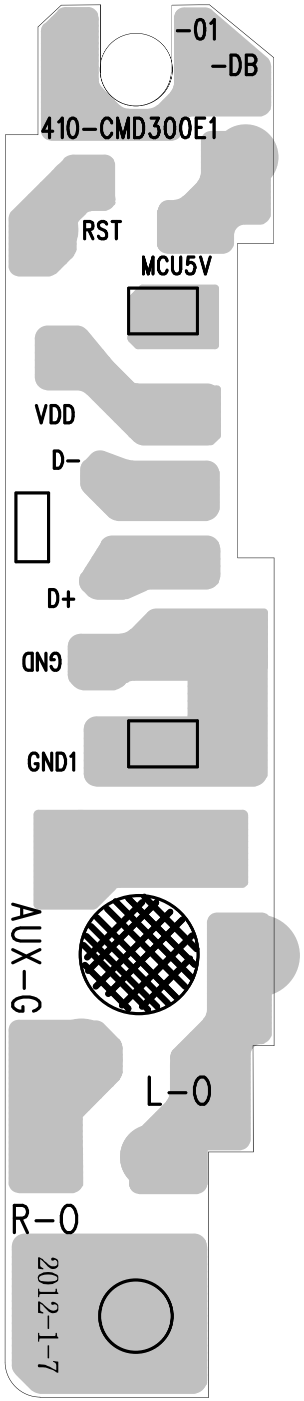


PCB LAYOUT-POWER BOARD BOTTOM SIDE VIEW

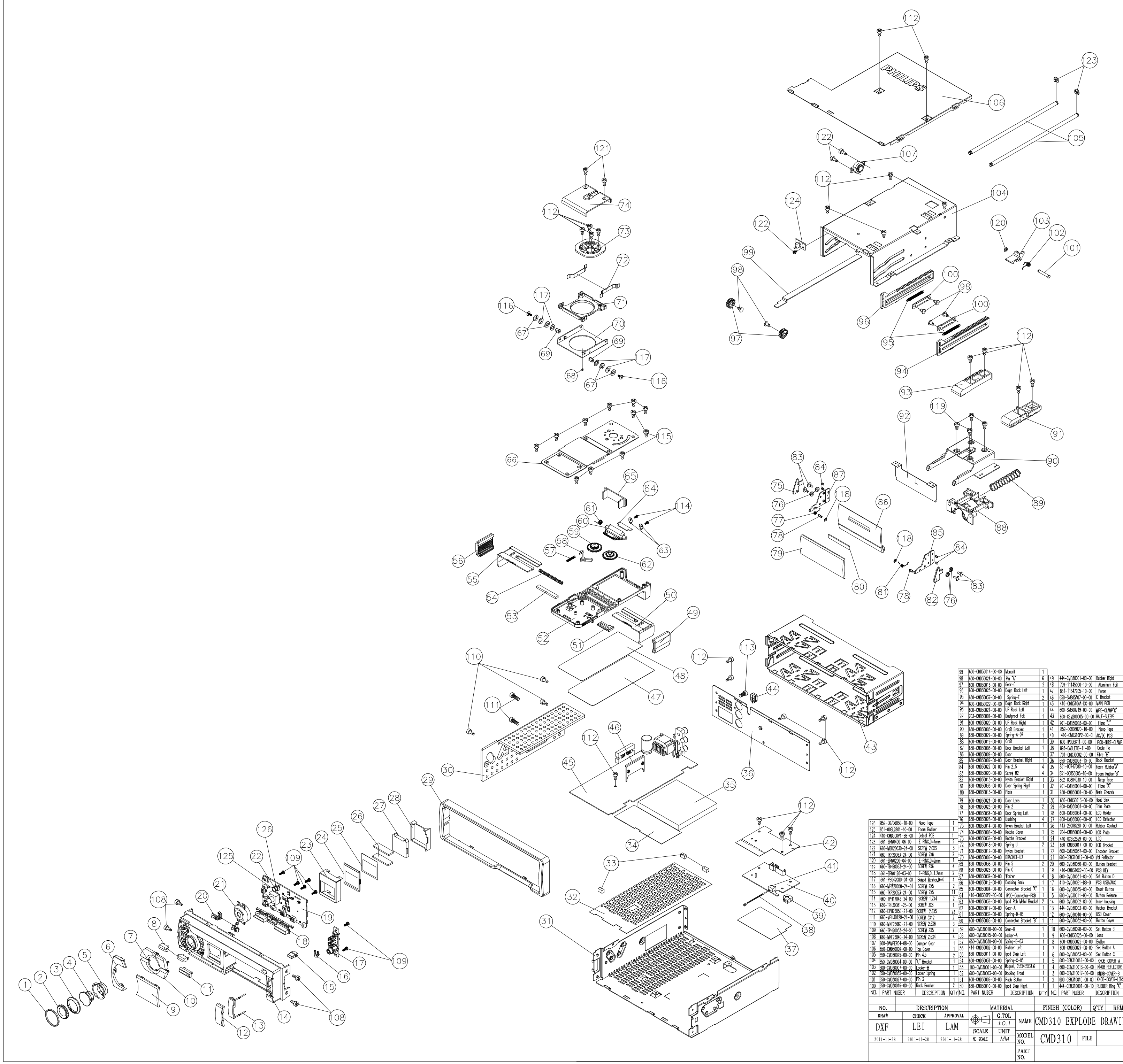



SW1
+5V
DN
DP
GND
USB902
AUX902

PCB LAYOUT-USB/AUX BOARD BOTTOM SIDE VIEW



SET EXPLODER VIEW DRAWING



NO.	PART NUBER	DESCRIPTION	QTY
126	852-00706050-10-00	Neop Tape	1
125	851-00SL2801-10-00	Foam Rubber	1
124	410-CMD300P1-BB-00	Detect PCB	1
123	661-ERM0400-06-00	E-RING,D=4mm	2
122	660-MBH20030-24-00	SCREW 2.0X3	3
121	660-TKF20063-24-00	SCREW 2X6	2
120	661-ERM0200-04-00	E-RING,D=2mm	1
119	660-TBH20063-24-00	SCREW 2X6	4
118	661-ERM0120-03-00	E-RING,D=1.2mm	2
117	661-PB042080-04-00	Bowed Washer,D=4	4
116	660-MPW20050-24-01	SCREW 2X5	2
115	660-TKF20053-24-00	SCREW 2X5	11
114	660-TPH17043-24-00	SCREW 1.7X4	2
113	660-TPH30081-23-00	SCREW 3X8	1
112	660-EPH2605B-21-00	SCREW 2.6X5	23
111	660-MPH30120-21-00	SCREW 3X12	2
110	660-MKF26060-21-00	SCREW 2.6X6	3
109	660-TPH20053-24-00	SCREW 2X5	7
108	660-MKF26040-24-00	SCREW 2.6X4	4
107	600-DAMPER04-08-00	Damper Gear	1
106	650-CMD30002-00-00	Top Cover	1
105	650-CMD30025-00-00	Pin 4.5	2
104	650-CMD30004-00-00	"U" Bracket	1
103	600-CMD30007-00-00	Locker-B	1
102	650-CMD30035-00-00	Locker Spring	1
101	650-CMD30027-00-00	Pin 3	1
100	650-CMD30016-00-00	Rack Bracket	2

NO.	PART NUBER	DESCRIPTION	QTY
99	650-CMD30014-00-00	Mandril	1
98	650-CMD30024-00-00	Pin "A"	6
97	600-CMD30016-00-00	Gear-C	2
96	600-CMD30023-00-00	Down Rack Left	1
95	650-CMD30037-00-00	Spring-E	2
94	600-CMD30022-00-00	Down Rack Right	1
93	600-CMD30021-00-00	UP Rack Left	1
92	703-CMD30001-00-00	Dustproof Felt	1
91	600-CMD30020-00-00	UP Rack Right	1
90	650-CMD30005-00-00	Orbit Bracket	1
89	650-CMD30029-00-00	Spring-A-07	1
88	600-CMD30019-00-00	Orbit	1
87	650-CMD30008-00-00	Door Bracket Left	1
86	600-CMD30009-00-00	Door	1
85	650-CMD30007-00-00	Door Bracket Right	1
84	650-CMD30022-00-00	Pin 2_5	4
83	650-CMD30020-00-00	Screw M2	4
82	600-CMD30013-00-00	Nylon Bracket Right	1
81	650-CMD30033-00-00	Door Spring Right	1
80	650-CMD30015-00-00	Plate	1
79	600-CMD30024-00-00	Door Lens	1
78	650-CMD30023-00-00	Pin 2	2
77	650-CMD30034-00-00	Door Spring Left	1
76	650-CMD30028-00-00	Bushing	4
75	600-CMD30014-00-00	Nylon Bracket Left	1
74	600-CMD30008-00-00	Rotate Cover	1
73	600-CMD30036-00-00	Rotate Bracket	1
72	650-CMD30018-00-00	Spring U	2
71	600-CMD30012-00-00	Nylon Bracket	1
70	650-CMD30006-00-00	BRACKET-U2	1
69	650-CMD30038-00-00	Pin 5	2
68	650-CMD30026-00-00	Pin C	1
67	650-CMD30039-00-00	Washer	4
66	650-CMD30012-00-00	Docking Back	1
65	600-CMD30004-00-00	Connector Bracket "A"	1
64	410-CMD300P2-BC-00	IPOD-Connector-PCB	1
63	650-CMD30036-00-00	Ipod Pcb Metal Bracket	2
62	600-CMD30017-00-00	Gear-A	1
61	650-CMD30032-00-00	Spring-D-05	1
60	600-CMD30005-00-00	Connector Bracket "B"	1
59	600-CMD30018-00-00	Gear-B	1
58	600-CMD30015-00-00	Locker-A	1
57	650-CMD30030-00-00	Spring-B-03	1
56	444-CMD30002-00-00	Rubber Left	1
55	650-CMD30011-00-00	ipod Claw Left	1
54	650-CMD30031-00-00	Spring-C-05	1
53	180-CMD30001-00-00	Magnet, 2.5X4.5X34.6	1
52	600-CMD30003-00-00	Docking Front	1
51	600-CMD30006-00-00	Push Button	1
50	650-CMD30010-00-00	ipod Claw Right	1

NO.	PART NUBER	DESCRIPTION	QTY
49	444-CMD30001-00-00	Rubber Right	1
48	709-11145000-10-00	Aluminum Foil	1
47	851-11347205-10-00	Poron	1
46	650-SM885A07-00-00	IC Bracket	1
45	410-CMD310AA-DC-00	MAIN PCB	1
44	600-SM300719-00-00	WIRE-CLAMP"C"	1
43	650-CEM200005-00-00	HALF-SLEEVE	1
42	701-CMD30003-00-00	Fibre "C"	1
41	852-00808070-10-00	Neop Tape	1
40	410-CMD310P2-DC-01	AC/DC PCB	1
39	600-IPODBK11-00-00	IPOD-WIRE-CLAMP	1
38	893-CABLETIE-11-00	Cable Tie	1
37	701-CMD30002-00-00	Fibre "B"	1
36	650-CMD30003-10-00	Back Bracket	1
35	851-00747080-10-00	Foam Rubber"A"	1
34	851-00853605-10-00	Foam Rubber"B"	1
33	852-00804030-10-00	Neap Tape	3
32	701-CMD30001-00-00	Fibre "A"	1
31	650-CMD30001-00-00	Main Chassis	1
30	650-CMD30013-00-00	Heat Sink	1
29	600-CMD30001-00-00	Trim Plate	1
28	600-CMD30034-00-00	LCD Holder	1
27	600-CMD30026-00-00	LCD Reflector	1
26	443-28008220-00-00	Rubber Contact	2
25	704-CMD30001-00-00	LCD Plate	1
24	440-0C352529-00-00	LCD	1
23	650-CMD30017-00-00	LCD Bracket	1
22	600-CMD30037-00-00	Encoder Bracket	1
21	600-CEM310012-00-00	Vol Reflector	1
20	600-CMD30030-00-00	Button Bracket	2
19	410-CMD310C2-DC-00	PCB KEY	1
18	600-CMD30031-00-00	Set Button D	1
17	410-CMD300E1-DB-01	PCB USB/AUX	1
16	600-CMD30035-00-00	Reset Button	1
15	600-CMD30011-00-00	Button Release	1
14	600-CMD30002-00-00	Inner housing	1
13	444-CMD30003-00-00	Rubber Bracket	1
12	600-CMD30010-00-00	USB Cover	1
11	600-CMD30032-00-00	Button Cover	1
10	600-CMD30028-00-00	Set Button B	1
9	600-CMD30025-00-00	Lens	1
8	600-CMD30029-00-00	Button	2
7	600-CMD30027-00-00	Set Button A	1
6	600-CMD30033-00-00	Set Button C	1
5	600-CEM310016-00-00	KNOB-COVER-A	1
4	600-CEM310013-00-00	KNOB REFLECTOR	1
3	600-CEM310017-00-00	KNOB-COVER-B	1
2	600-CEM310010-00-00	KNOB-COVER-LENS	1
1	444-CEM310001-00-10	RUBBER Ring "A"	1

NO.	DESCRIPTION		MATERIAL		FINISH (COLOR)	Q'TY	REMARK
DRAW	CHECK	APPROVAL		G.TOL	NAME	CMD310 EXPLODE DRAWING	
DXF	LEI	LAM		±0.1			
			SCALE	UNIT	MODEL NO.	CMD310	FILE
2011-11-28	2011-11-28	2011-11-28	NO SCALE	MM			
					PART NO.		

Trouble shooting

Product Model		CMD310	Area	All area	Tate	2012-1-12	
NO.	failure phenomena	failure cause					remark
1	NO Power	a. To check whether the ISO301(16pin) connector of the tail of the unit is connect well , Whether it is loose of the 15A fuse of the yellow wire, or insert non in place.					
		b.To check the connectors of the CON901、CON202 ，whether the socket of it is loose.					
		c. To check the 5 pin voltage of the IC201(MCU) should be +5V0.					
		d. To check each voltage regulator IC's output voltage is normal, IC303, 304 should be +9 V0 voltage output, IC302 should +3 V3 voltage outputs, IC605 should be +1 V2 voltage output.					
		e. To check the oscillation frequence of crystal CF201 shuold be 32.768KHZ.					
2	LCD Display abnormal	a.To check the Panel PCB on the LCD driver IC (IC901) of the 56 pin power supply is normal, should be +5 V0.					
		b.To check whether the LCD Panel iron bracket for loose.					
3	No audio output	a. To check whether the volume knob is turn to the minimum position.					
		b. To check whether the unit is at MUTE mode, press SOURCE button and check whether it is effective of the input sound source.					
		c. To check whether the connection of 8 PIN audio output wire of ISO connector is correct; wrong connection or short circuit to the ground will caused the protection of the power amplifier(no voltage output).					
		d . To check the circuit of power amplifier IC501(7388 IC) and VOLUME IC402(7313 IC).					
		e. To check the voltage of 22 pin(MUTE) of power amplifier IC501(7388 IC) , normally should be +3V2.					
4	Radio abnormal	a. To check the antenna of the AM/FM tuner.					
		b. To check whether the strength of then input signal of the tuner is too weak.					
		c.To check the 2 pin voltage of the IC401 should be +3 V3.					
		d. To check the oscillation frequence of crystal XT001 of the tuner module,should be 32.768MHz.					

NO.	failure phenomena	failure cause	remark
5	iPHONE defective	a. To check the iPHONE connector and the Dock socket whether there is poor contact.	
		b. To check the SOURCE shoule be in iPHONE mode.	
		c. To check whether it is normal when reading USB?	
		d. To check the 1 pin voltage of the CON801,should be +2V9.	
		e. To check the SW2 switch in the Dock box.	
		f. To check the CON301 and CON801 connector on the main board , whether the plugs of it is loose.	
		g.To check the 1 pin voltage of the CON703 in the dock, should be +5V0.	
		h.To check in the dock the CON701、CON702、CON703 connector ,whether the plugs of it is loose.	
6	USB defective	a. To check whether the USB signal format is correspond to the request of the unit.	
		b. To check the voltage of the USB connector of the top first pin , should be +5V.	
		c. To check whether there is any wearing and scratch of the shrapnel and pin of the panel USB.	
		d.To check the CON703 connectors on the main board , whether the plugs of it is loose.	
7	AUX defective	a. To check the SOURCE shoule be in MP3-LINK mode.	
		b. To check the AUX IN input signal.	
		c. To check the CON402 connectors on the main board,whether the plugs of it is loose.	
8	BT defective	a.To check the unit should be in pair with the BT phone connection status.	
		b.To check the 4 pin voltage of BT module,should be +5V0.	
		c.To check the 17PIN FFC flat cable in the panel to the main board, whether the plugs of it is loose.	
9	Dock door defective	a.Press the EJECT button, to do a pull and push the dock operation.	